PRECILEC
ZODIAC AEROSPACE

RCI90S/T HS

Hollow Shaft - Incremental Optical Encoder

PRECILEC optical incremental encoders are designed for accurately measuring speed and position of rotating shafts in industrial environment: machine tools, motor drives …
They use a differential optical measurement and a ratio-metric processing of the signal for minimizing the temperature and photodiode aging effects.
Their universal complementary push-pull output interface and their large supply voltage range make them very easy to connect to most of electronic control units with high noise immunity.

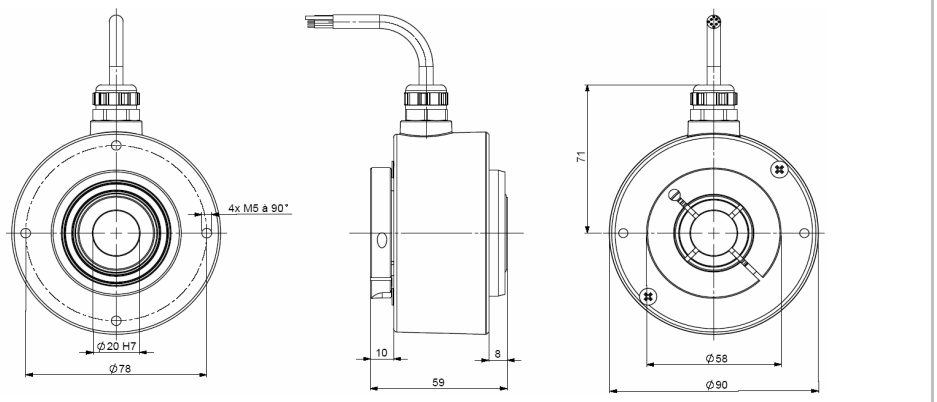
CE
RADIO-ENERGIE

Main features

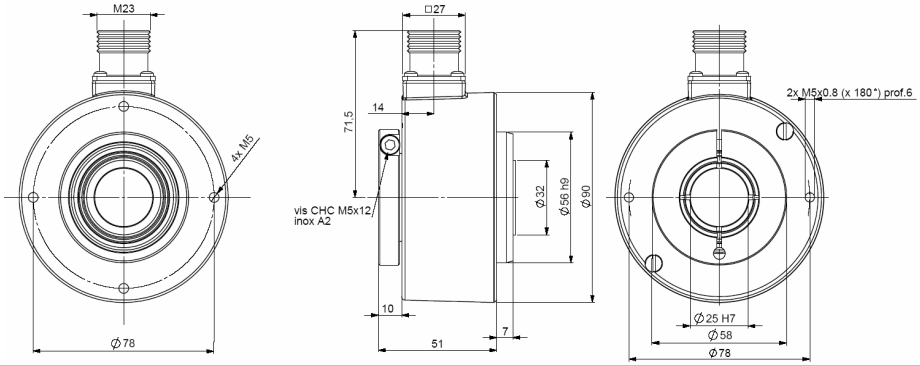
• Shaft type	Hollow shaft Ø 30 mm, and others diameters available (12, 20 , 25 mm) with reduction ring in composite for thermal and electric insulation
• Housing diameter	90 mm
• Fixation	2 spring plates
• Body - Cover	Aluminium – Zinc alloy
• Shaft	Stainless steel
• Pulses per turn	Up to 10.000 ppr
• Output signals	A & B with gated Z
• Connections	Radial cable or M23 (CW and CCW)
• Operating temperature range	- 20°C / + 80°C (standard resolutions)

Outline drawings

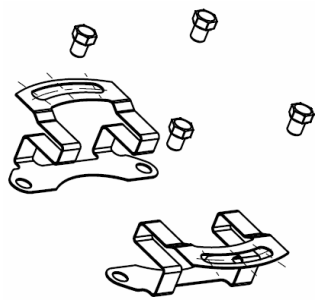
With radial cable, 20 mm reduction ring mounted

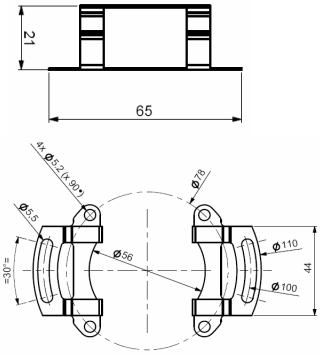


M23 connector, 25 reduction ring mounted



Double spring plate





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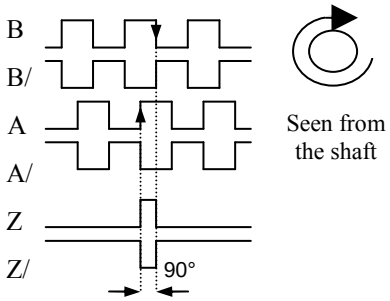
Electrical characteristics

Supply voltage	11 to 30 Vdc	5 Vdc
Output signals	Push-pull (**T**)	RS422 (**S**)
Max output frequency	100 kHz	
Max load current per channel	40 mA max	
EMC	According to EN 61000-6-2 and EN 50081-1	

Connections

	Cable - 8 wires	M23 - CW	M23 - CCW	Output waveforms
A	green	3	8	
A /	pink	6	1	
B	yellow	4	5	
B /	blue	7	6	
Z	grey	5	3	
Z /	red	8	4	
Vcc (+)	brown	2	2 + 12	
Gnd (-)	white	1	10 + 11	
Ground case	General shielding	Connector body	Connector body	

Mechanical characteristics

- Max continuous speed — 3 600 min^{-1}
- Max permissible speed — 6 000 min^{-1}
- Starting torque — ≤ 25.10^{-3} N.m
- Shaft Inertia — ≤ 55.10^{-6} $kg.m^2$
- Weight — 700 gr
- Protection — IP 65 (EN 60529)
- Max shock — ≤ 500 $m.s^{-2}$ (during 6 ms) (EN60068-2-27)
- Max vibrations — ≤ 200 $m.s^{-2}$ (55 … 2 000 Hz) (EN60068-2-6)